

ABSTRACT

A mechanical support configuration for a probe card of a wafer test system is provided to increase support for a very low flexural strength substrate that supports spring probes. Increased mechanical support is provided by: (1) a frame around the periphery of the substrate having an increased sized horizontal extension over the surface of the substrate; (2) leaf springs with a bend enabling the leaf springs to extend vertically and engage the inner frame closer to the spring probes; (3) an insulating flexible membrane, or load support member machined into the inner frame, to engage the low flexural strength substrate farther away from its edge; (4) a support structure, such as support pins, added to provide support to counteract probe loading near the center of the space transformer substrate; and/or (5) a highly rigid interface tile provided between the probes and a lower flexural strength space transformer substrate.